Succeeding with a Dam Removal Project
November 30–December 2, 2004
Raleigh, North Carolina

By invitation of and in cooperation with:
American Rivers
North Carolina Department of Environment and Natural Resources, Ecosystem Enhancement Program
North Carolina State University, Center for Transportation and the Environment
United States Fish and Wildlife Service

Printed on recycled paper.

Nonprofit Organization U.S. Postage PAID University of Wisconsin

COLLEGE OF ENGINEERING
UNIVERSITY OF WISCONSIN-MADISON
Department of Engineering Professional Development
432 North Lake Street Madison, Wisconsin 53706

THE UNIVERSITY of WISCONSIN MADISON

COLLEGE OF ENGINEERING ■ DEPARTMENT OF ENGINEERING PROFESSIONAL DEVELOPMENT

Succeeding with a Dam Removal Project

November 30–December 2, 2004
Raleigh, North Carolina

- Identify key decision points
- Implement practical, efficient dam removal approaches
- Know how to maximize environmental endpoints
- Understand engineering, sediment management and water quality issues

CONTINUING EDUCATION UNITS 2.0 CEU

By invitation of and in cooperation with:
American Rivers
North Carolina Department of Environment and Natural Resources, Ecosystem Enhancement Program
North Carolina State University, Center for Transportation and the Environment
United States Fish and Wildlife Service

Succeeding with a Dam Removal Project

November 30–December 2, 2004 in Raleigh, North Carolina

Save time and money!
Inquire about our on-site courses.
Call 800-462-0876 today!

Focus on All Aspects of Dam Removal

This practical course will evaluate all aspects of dam removal, including

- the key decision points
- how to remove a dam efficiently and maximize environmental endpoints
- engineering and management issues associated with a range of dam types
- sediment management and water quality issues related to dam removal
- practical approaches to remove both large and small dams

You'll also have the opportunity to consider dam removal case studies and lessons learned from dam removal projects.

Your instructors are experts working in this cutting-edge area. They will share with you key insights and approaches gained from years of experience.

For Related Course Descriptions
http://epdweb.engr.wisc.edu/catalogs/civil.lasso

Why This Course?

Aging dams are becoming a critical engineering issue. The American Society of Engineers has graded dams a "D" in its report card on the country's infrastructure. Add in the relicensing issues, the Endangered Species Act, sediment management issues, concerns from the public, property owners and environmentalists, lack of funds, declining safety ratings, and expensive repairs, and you have a complicated design project.

Dam removal issues are particularly timely in areas where attention on restoring fisheries habitat and rivers has brought increasing attention to dams, their useful economic life, and their impacts on water quality and ecological sustainability.

Course Objectives

Professionals working on dams will gain comprehensive information on dam removal and associated issues. The course will emphasize

- technical tools
- design and construction approaches
- environmental benefits, issues and risks
- sediment management
- social perspectives, and more!

Intended Audience

This course will benefit

- design engineers
- biologists
- regulatory review professionals
- dam owners
- contracting service personnel
- contractors
- public sector professionals
- planners

Special Course Materials

In addition to the comprehensive course notebook, you will receive the Heinz Center's 2002 book, *Dam Removal: Science and Decision Making*, the Aspen Institute's *Dam Removal: A New Option for a New Century*, American Rivers' report, "Exploring Dam Removal," and a digital copy of American Rivers' "Dam Removal Toolkit."

Earn Continuing Education Credits

By participating in this course, you will earn 2.0 Continuing Education Units (CEU) or 20 Professional Development Hours (PDH).

Course Outline

Tuesday November 30

***7:30* Registration**
Sheraton Raleigh Capitol Center Hotel
421 South Salisbury St.
Raleigh, North Carolina

***8:00* Welcome and Introduction**
John Morris
Director, Division of Water Resources
North Carolina Department of Natural Resources
Raleigh, North Carolina

Patrick Eagan PhD, PE
Program Director/Associate Professor
Department of Engineering Professional Development
University of Wisconsin–Madison

***8:20* River Integrity and Dams: A National Perspective**
Will Graf
Professor of Geography
University of South Carolina
Columbia, South Carolina

***9:40* Dam Removal Project Overview**
Jim MacBroom
Vice President
Milone and MacBroom Inc.
Cheshire, Connecticut

***10:40* Break**

Course outline continues...

Succeeding with a Dam Removal Project

November 30–December 2, 2004 in Raleigh, North Carolina

Course outline continued...

11:00 An Innovative Model for Stream Restoration Through Mitigation
Suzanne Klimek
Operations Manager
North Carolina Department of Environment and Natural Resources, Ecosystem Enhancement Program
Raleigh, North Carolina

12:00 Lunch

1:00 Social Components of Dam Removal: Statewide and Project-Level Approaches
Stephanie Lindloff
River Restoration Coordinator
New Hampshire Department of Environmental Services
Concord, New Hampshire

2:30 Break

2:50 Regulatory Framework, Agency Permitting, and Environmental Assessments
Panel includes:
John Dorney
Supervisor of Wetland Development Unit
North Carolina Department of Environment and Natural Resources
Raleigh, North Carolina

Jean Manuele
Office Supervisor
U.S. Army Corps of Engineers
Raleigh, North Carolina

4:45 Adjournment

Wednesday, December 1

7:30 Coffee and Conversation

8:00 Riparian Zone Recovery and Channel Adjustment Following the Removal of a Low-Head Dam in North Carolina
Adam Riggsbee
PhD Graduate Student
University of North Carolina
Chapel Hill, North Carolina

Martin Doyle (Invited)
Professor
Geography Department
University of North Carolina
Chapel Hill, North Carolina

9:30 Break

Dealing with Sediment Behind Dams

9:50 Sediment Sampling for Dam Removal
Toxicity Issues
Joe Rathbun
Water Quality Specialist
Michigan Department of Environmental Quality
Livonia, Michigan

11:00 Sediment Quality Evaluation and Impact Assessment
Tom Augspurger
Ecotoxicologist
United States Fish and Wildlife Service
Raleigh, North Carolina

12:15 Lunch

1:00 The Effect of Dam Removal on Fish Resources
- Are fish taking advantage of increasing habitat?
- Are fish populations affected?

Joseph Hightower
Professor
United States Geological Survey
North Carolina Cooperative Fish and Wildlife Research Unit
Department of Zoology
North Carolina State University
Raleigh, North Carolina

2:30 Break

2:45 The Effects of Dam Removal on Mollusks
John Alderman
Principal
Alderman Environmental Services
Pittsboro, North Carolina

3:30 Fisheries Issues and Dam Removal Impacts
Mike Wicker
Restoration Biologist
United States Fish and Wildlife Service
Raleigh, North Carolina

4:45 Adjournment

Thursday, December 2

7:30 Coffee and Conversation

8:00 Engineering Removal Techniques for Small Dams
- Expanding grout
- Explosives
- Saws

Anna Chong
Principal
Big Blast
Coeur d'Alene, Idaho

9:15 Break

9:30 Dam Removal Site Restoration
Jim MacBroom

10:30 Dam Removal Guidelines
Jean Manuele

11:30 Case Study: Rains Mill Dam
John Sutherland
Section Chief
North Carolina Department of Environment and Natural Resources
Raleigh, North Carolina

12:00 Lunch

1:00 Case Study: Quaker Neck and Cherry Hospital Dams
Mike Wicker

1:45 Case Study: Embrey Dam
Michele Hecht Cleland
Oceanographer
U.S. Army Corps of Engineers
Norfolk, Virginia

2:15 Break

2:30 Case Study: Lowell and Carbonton Dams
George Howard
Partner
Restoration Systems LLC
Raleigh, North Carolina

3:15 Final Adjournment

Coming by Car?

From Raleigh-Durham Airport, take Exit 298-B (South Sanders Street). South Sanders Street becomes McDowell Street. Stay on McDowell and take a right onto Davie Street, then a right onto Salisbury Street. The Sheraton is one block on the left. To enter parking deck, take immediate right onto Gale Street. Sheraton Parking Deck entrance is second on the right. Parking is $2 per hour, maximum cost $10.

Enroll online today! epdweb.engr.wisc.edu/webG555

Related Courses in Raleigh, North Carolina

Engineering Innovative Fish Passage: Design of Fish Passage at Dams and Road Crossings
January 10–12, 2005
Course #G556

Engineering Innovative Fish Passage: Design of Nature-Like Fishways
January 13–14, 2005
Course #G557

For details call toll free 800-462-0876, or check our Web site at http://epdweb.engr.wisc.edu/catalogs/civil.lasso

On-site Courses Save Time & Money!

Engineering Professional Development can offer many of its courses:

- At a location of your choice in North America
- At your convenience
- At reduced per-person cost
- Tailored to your needs

To inquire about courses that we can bring to your site, including optimal group size and costs, or to request an on-site course, call 800-462-0876 or check our Web site at http://epdweb.engr.wisc.edu/onsite/

Four Easy Ways to Enroll

Phone:
800-462-0876 or
608-262-1299 (TDD 265-2370)

Internet:
http://epdweb.engr.wisc.edu/webG555

Mail to:
Engineering Registration, The Pyle Center
702 Langdon Street, Dept. 107
Madison, Wisconsin 53706

Fax:
800-442-4214 or 608-265-3448

Need To Know More?

Call toll free **800-462-0876** and ask for

Program Director:
Patrick Eagan PhD, PE
eagan@engr.wisc.edu

Program Assistant:
Diane Lange

Or e-mail **custserv@epd.engr.wisc.edu**

General Information

Fee Covers Course materials and texts, break refreshments, lunches and certificate. Course materials are distributed only to course participants. We do not publish proceedings.

Cancellation If you cannot attend, please notify us by November 23, and we will refund your fee. Cancellations received after that date and no-shows are subject to a $150 administrative fee. You may enroll a substitute at any time before the course starts.

Location Sheraton Raleigh Capital Center Hotel (http://www.sheraton.com/capitalcenter), 421 South Salisbury Street, Raleigh, North Carolina.

Accommodations We have reserved a block of sleeping rooms ($82 single or double plus tax) for course participants at the Sheraton Raleigh Capitol Center Hotel, the course site. To make a reservation, call 800-325-3535 by November 5 and tell the reservation specialist that you will be attending the UW–Madison course, *Succeeding with a Dam Removal Project*. After November 5, the special room rates will still be available for attendees if rooms are available.

Course Information

❑ Please enroll me in **Succeeding with a Dam Removal Project**
Course #G555 November 30–December 2, 2004 in Raleigh, North Carolina Fee: $895

❑ I cannot attend at this time. Please send me brochures on future courses.

Personal Information (Please print clearly.)

Name _____

Title _____

Company _____

Address _____

City/State/Zip _____

Phone (_____) _____ Fax (_____) _____

E-mail _____

Additional Enrollees

Name _____

Title _____

E-mail _____

Name _____

Title _____

E-mail _____

Billing Information

❑ Bill my company ❑ P.O. or check enclosed (Payable in U.S. funds to UW–Madison)

❑ MasterCard ❑ VISA ❑ American Express

Cardholder's Name _____

Card No. _____ Expires _____

UW# ❑ ❑ ❑ **Important–please enter the 3-digit UW# Code from the mailing label.**

❑ Please check the box if you are a person with a disability and desire special accommodations. A customer service representative will contact you. Requests will be kept confidential.